

WE CLAIM:

1. An X-ray optical system for examining a sample, the system comprising:
 - an X-ray source from which X-ray radiation is guided to the sample;
 - an X-ray detector for receiving radiation from the sample;
 - at least one X-ray optical element disposed between said source and the sample and/or between said detector and the sample; and
 - wobble means cooperating with said at least one optical element to move said at least one optical element in an oscillating fashion.
2. The system of claim 1, wherein said at least one optical element is at least one of a collimator, a monocapillary, a polycapillary, an X-ray mirror, and a monochromator.
3. The system of claim 1, wherein said X-ray radiation is diffracted or scattered from the sample.
4. The system of claim 1, wherein said wobble means is activated for a measurement of the sample.
5. The system of claim 1, wherein an oscillation frequency of said wobble means is selected such that an integer multiple of half oscillations is performed during one measurement.
6. The system of claim 1, wherein said wobble means can cause at least two mutually independent oscillations of said X-ray optical element.

7. The system of claim 1, wherein amplitudes of said wobble means can be adjusted to sweep predetermined, selected regions of the sample.
8. The system of claim 1, wherein a first wobble means is disposed on a side of said source and a second wobble means is disposed on a side of said detector, wherein said first and said wobble means have synchronized oscillation motions.
9. The system of claim 1, wherein said wobble means comprises a motorized drive.
10. The system of claim 1, wherein said wobble means comprises a piezo element.
11. The system of claim 1, wherein an amplitude of said wobble means is adjusted such that angular changes in said X-ray radiation impinging on the sample are less than 1° .
12. The system of claim 1, wherein an amplitude of said wobble means is adjusted such that angular changes in said X-ray radiation detected by said detector are less than 1° .
13. The system of claim 1, wherein an amplitude of said wobble means is adjusted such that angular changes in said X-ray radiation impinging on the sample are less than or approximately equal to 0.5° .
14. The system of claim 1, wherein an amplitude of said wobble means is adjusted such that angular changes in said X-ray radiation detected by said detector are less than or approximately equal to 0.5° .